aimtec
Your Power Partner

Series AMER120C-CAZ

up to 5A | AC-DC / DC-DC | LED Driver / Converter

FEATURES:

- Constant Current or Constant Voltage LED Driver or Converter
- Input range 90-305VAC/47-440Hz
- High Efficiency up to 88%
- 115VAC Operating temperature -50 to 85°C
- 230VAC Operating temperature -55 to 85°C
- Dimmable via resistive / 0-10Vdc / PWM
- 5 Years Limited Warranty
- Over Temperature Protection
- Over Current Protection
- Waterproof Case rated IP68
- Power Factor Correction
- Short Circuit Protection

Models
Single output

Model	Max Output Power (W)①	Output Voltage Range (V)③	Output Current (A)③	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Mode of Operation	Efficiency (%)		
							115 VAC	230 VAC	277 VAC
AMER120C-50250CAZ	125	36-50	0-2.5	90-305/47-440	130-430	Constant Current	87	88	86
						Constant Voltage②	87	88	88
AMER120C-36340CAZ	122.4	24-36	0-3.4	90-305/47-440	130-430	Constant Current	87	88	88
						Constant Voltage②	87	88	88
AMER120C-24500CAZ	120	12-24	0-5	90-305/47-440	130-430	Constant Current	85	86	87
						Constant Voltage②	86	86	87

① Exceeding the maximum output power will permanently damage the converter.

② The dimming feature is not supported when units are used in Constant Voltage mode only.

③ In constant current mode output current is maximum shown, in constant voltage mode output voltage is the maximum shown. All models can be ordered with optional North American colour input wires (black (L), white (N), green (GND)). Add "–NA" to part number when ordering.

NOTE: Aimtec limited warranty of 5 years is valid based on product operation at datasheet specifications at ambient temperature of 25°C, humidity<75%, nominal input voltage (115/230/277VAC) and at rated output load unless otherwise specified.
See http://www.aimtec.com/terms-sale

AMER120C-CAZ's AC/DC LED drivers have electrical safeguards designed within to protect it from conventional electrical abnormalities with the levels listed in the safety table. Applications for use within rural agricultural, heavy industrial, and other areas or regions which are prone to 'dirty' electrical conditions which would subject any of the above models to excessive voltages surges or spikes, may damage or cause early life failure of product. In this case consideration should be made by the end user to ensure that adequate line or mains surge suppression is installed in front of Aimtec device to ensure the longevity of the products. Failure to identify excessive line surges violations prior to installation may damage sensitive equipment permanently.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		1800	mA
	230 VAC		800	mA
	277 VAC		700	mA
Inrush current <2ms (cold start)	115 VAC		45	A
	230 VAC		60	A
	277 VAC		70	A
Leakage current	I/O		0.25	mA
	I/FG, O/FG		3.5	mA
Power factor	115 VAC	0.98		
	230 VAC	0.94		
	277 VAC	0.92		
External fuse	Recommended slow blow type	3		A
Start-up time		900		ms

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±3		%
Line regulation	(LL-HL)	±2		%
Load regulation	0-100% load	±3		%
Ripple & Noise*		150		mV p-p
Hold-up time		80		ms
Current adjustment range		100-10		%

④ Ripple and Noise are measured at 20MHz bandwidth by using a 0.1μF (M/C) or (C/C) and 47μF (E/C) parallel capacitor.

Isolation Specifications

Parameters		Conditions	Typical	Rated	Units
Tested voltage	I/O	3sec		3750	VAC
	I/FG			2000	VAC
	O/FG			500	VAC
Isolation resistance		500VDC	>1000		MΩ

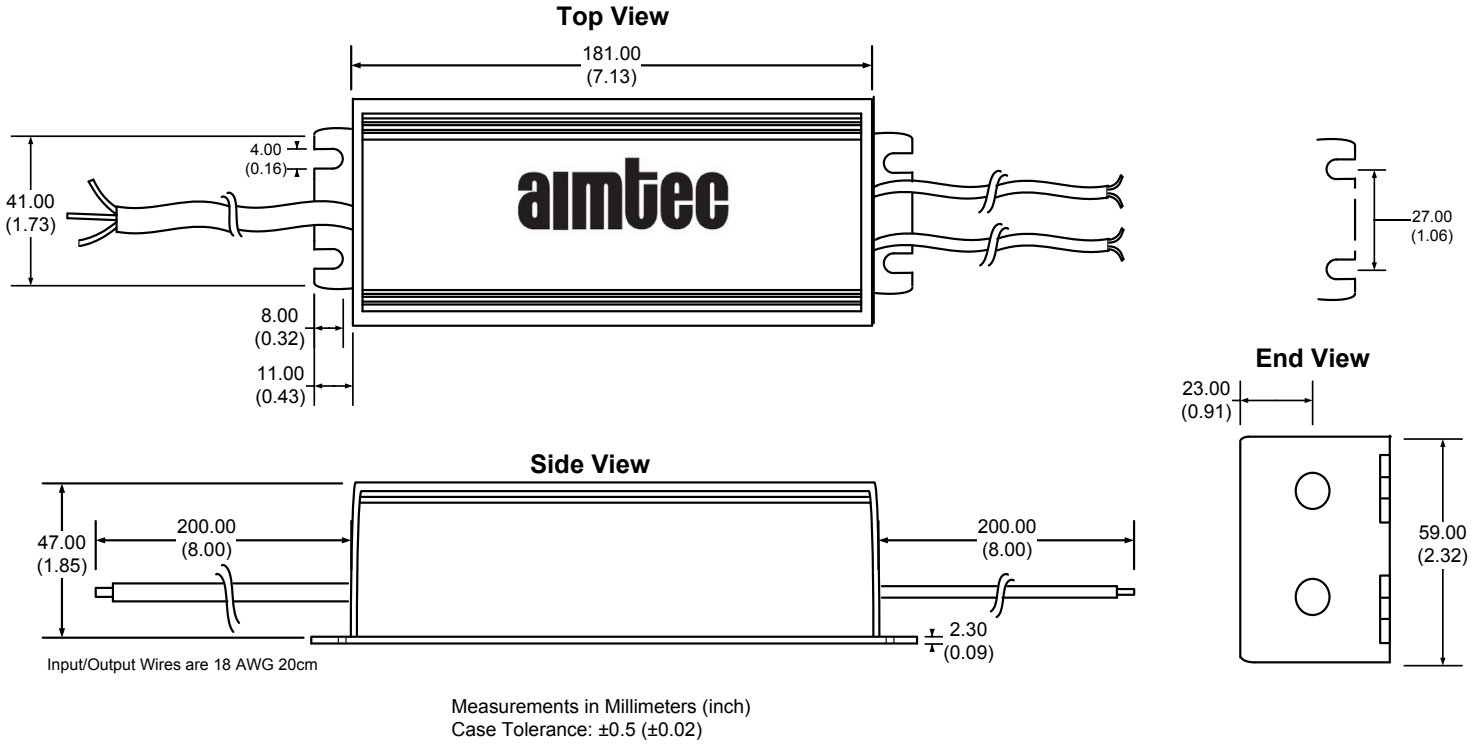
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			125	KHz
Over current protection		≧105		%
Over voltage protection		≧105		%
Short circuit protection		Continuous		
Short circuit restart		Auto recovery		
Over temperature protection	Detect transformer temperature	125		°C
Operating temperature (See Derating Table)	(115VAC)	-50 to +85		°C
	(230VAC)	-55 to +85		°C
Cold Start-up Time	-55°C		30	Sec
Maximum case temperature			100	°C
Storage temperature		-55 to +95		°C
Temperature coefficient		±0.02		% / °C
Cooling		Free air convection		
Humidity			95	% RH
Case material		Aluminum		
Potting		Epoxy (IP68 rated)		
Wires		UL1015 18AWG Input & 14AWG Output *20CM		
Weight		900		g
Dimensions (L X H X W)		7.13 x 2.32 x 1.85 inches 181.00 x 59.00 x 47.00 mm		
MTBF		>400,000 hrs (MIL-HDBK-217F at +25°C)		

Safety Specifications

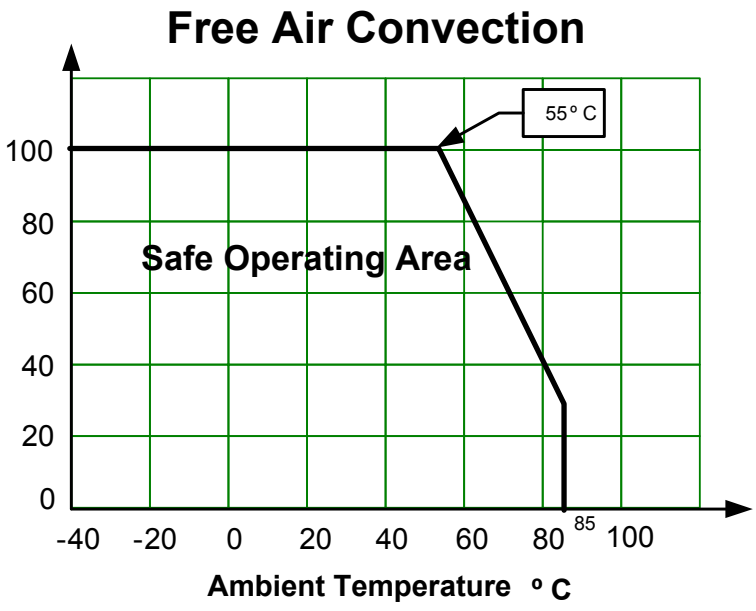
Parameters	
Agency approvals	CE
Standards	EN55022, class B, EN60529(IP68), EN61347-1, EN61347-2-13
	NOTE : also designed to meet cULus, UL8750, UL60950-1

Dimensions

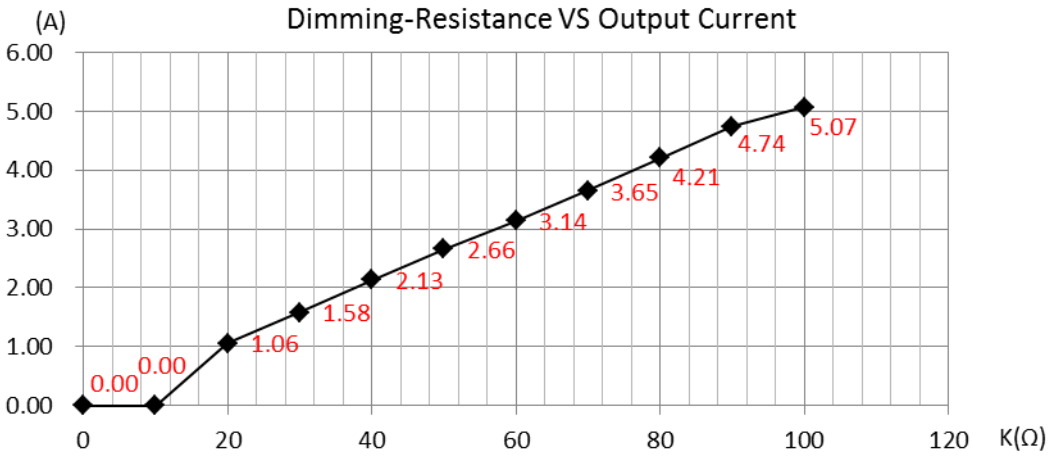


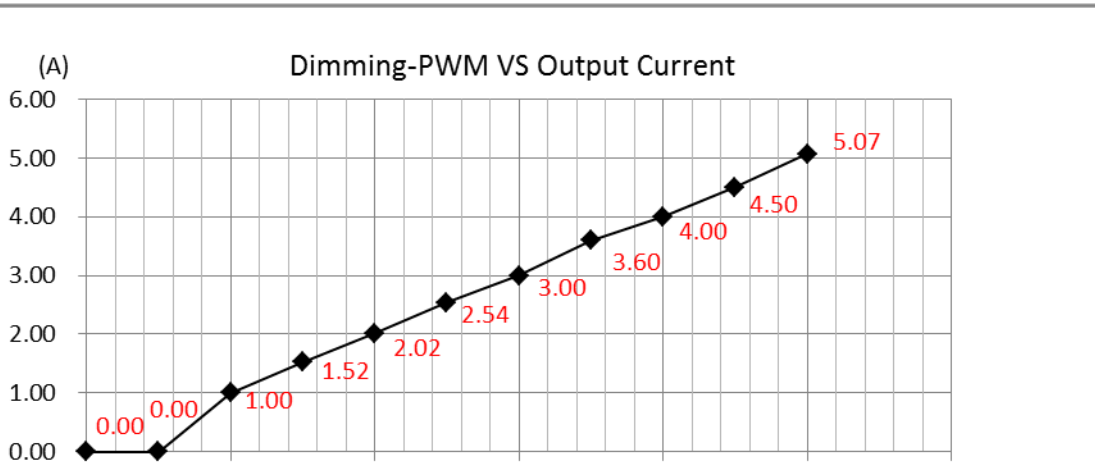
Measurements in Millimeters (inch)
Case Tolerance: ±0.5 (±0.02)

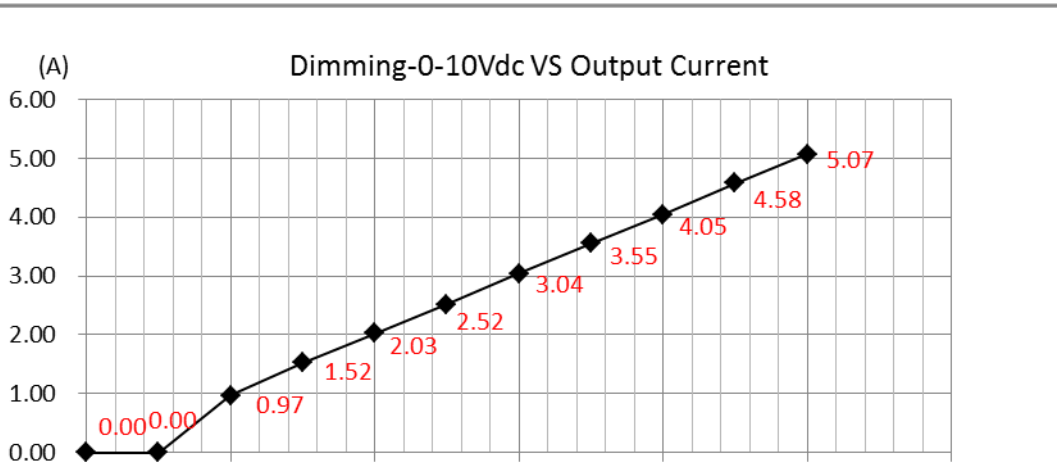
Derating



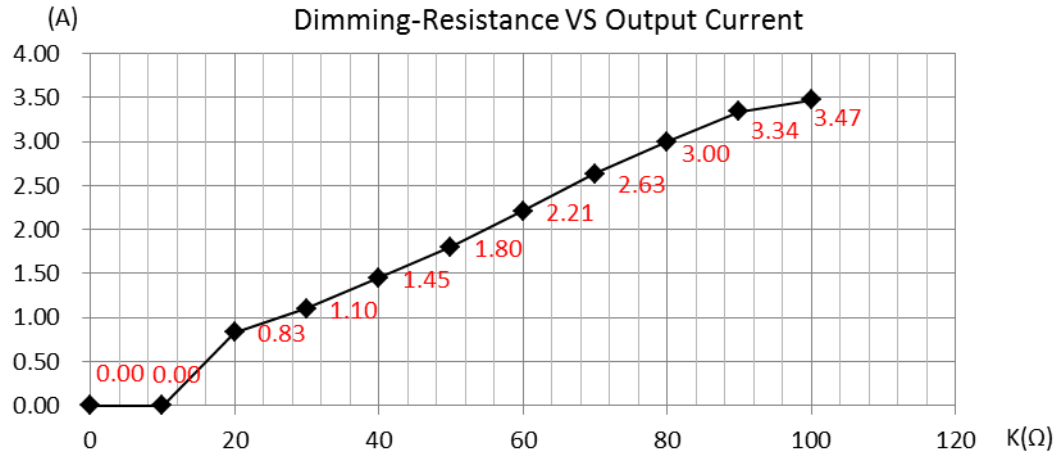
Dimming Performance
AMER120C-24500CAZ

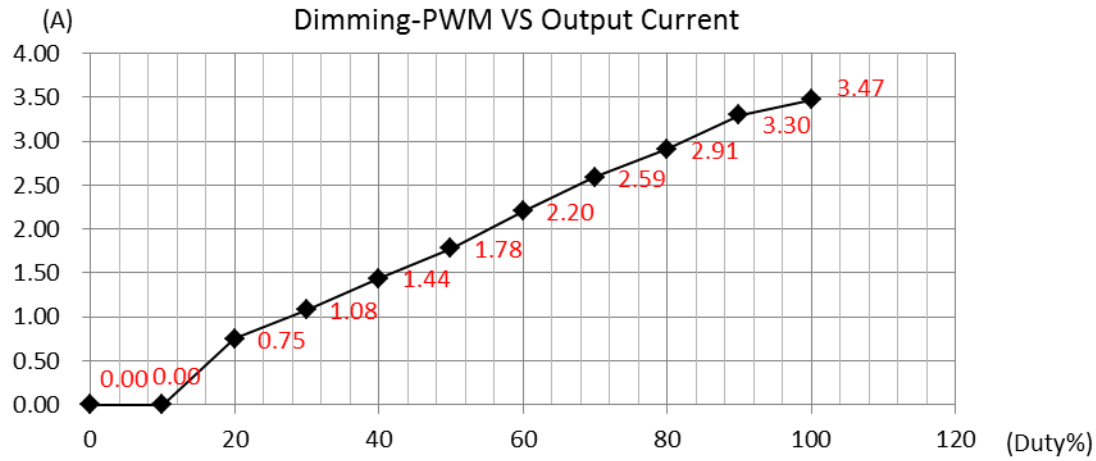


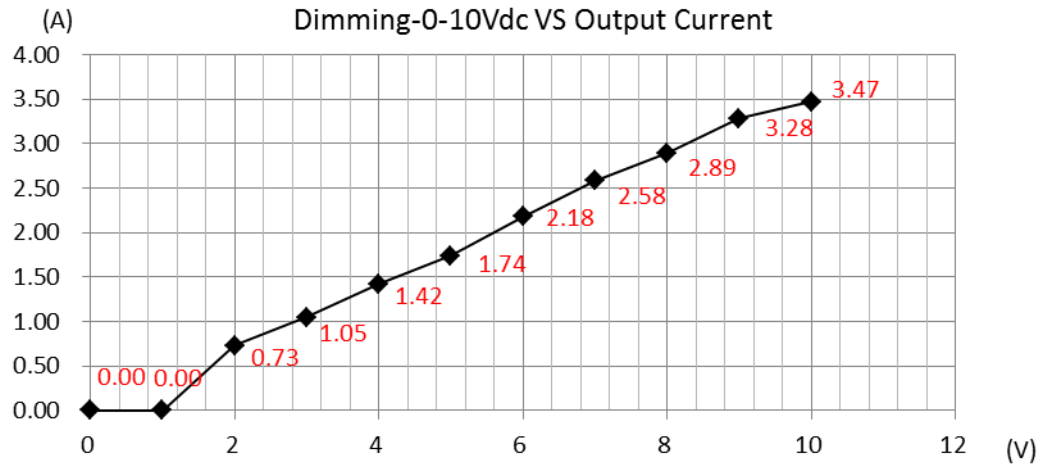




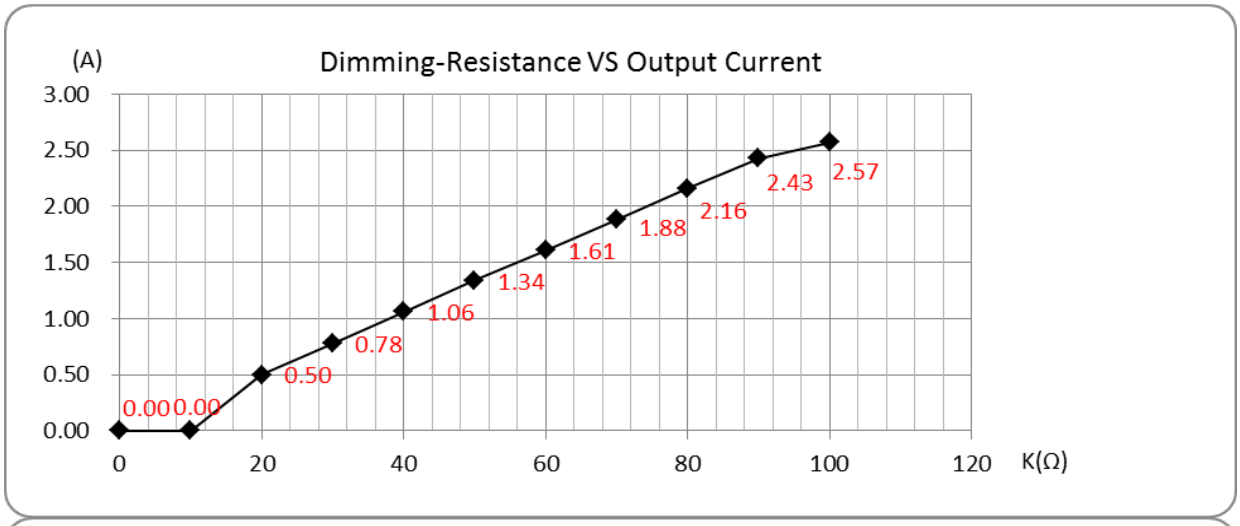
AMER120C-36340CAZ

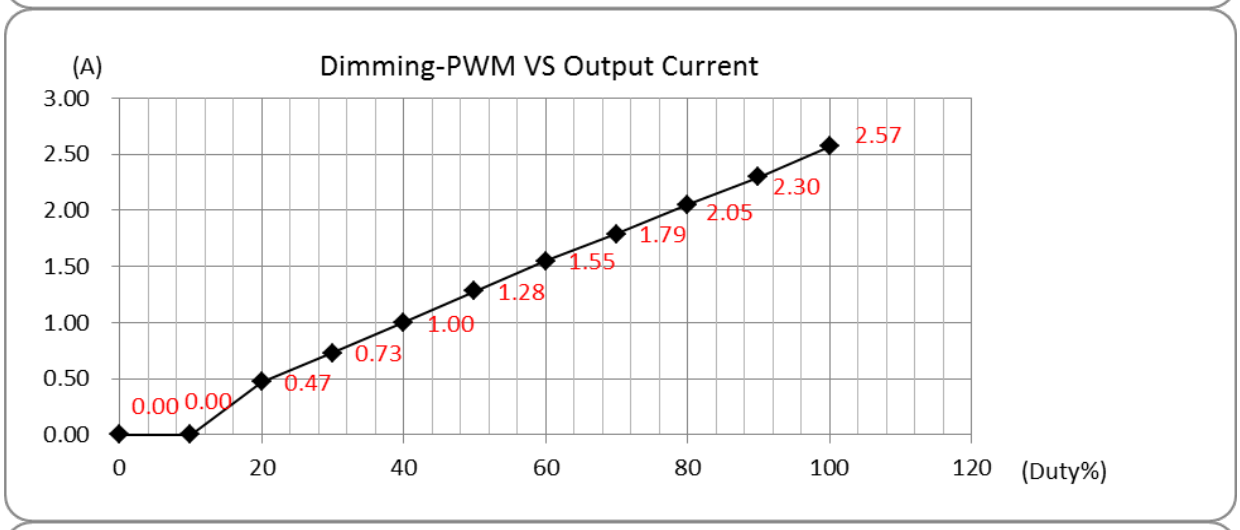


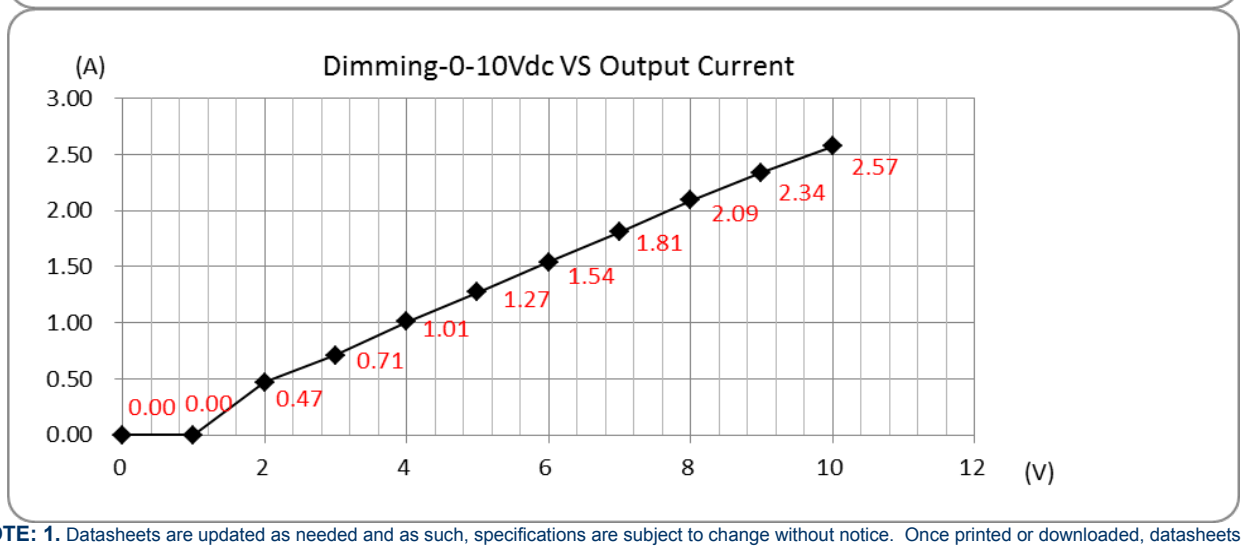




AMER120C-50250CAZ







NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. **2.** Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. **3.** Mechanical drawings and specifications are for reference only. **4.** All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. **5.** Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. **6.** This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.